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Docket No. RSW920010154US1

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: **Haynes**

Serial No. 10/044,728

Filed: January 11, 2002

For: **Pointing Device Attribute
Variance Based on Distance/Time
Ratio**§
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§

Group Art Unit: 2675

Examiner: **Srilakshmi K. Kumar**

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Alexandria, VA 22313-1450ATTENTION: Board of Patent Appeals
and InterferencesCertificate of Mailing Under 37 C.F.R. § 1.8(a)I hereby certify this correspondence is being deposited with the
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By:

Amy Miller
Amy Miller

APPELLANT'S BRIEF (37 C.F.R. 1.192)

This brief is in furtherance of the Notice of Appeal, filed in this case on June 10, 2004.

The fees required under § 1.17(c), and any required petition for extension of time for filing this
brief and fees therefore, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief is transmitted in triplicate. (37 C.F.R. 1.192(a))

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REAL PARTIES IN INTEREST

The real party in interest in this appeal is the following party:

International Business Machines Corporation of Armonk, New York.

RELATED APPEALS AND INTERFERENCES

With respect to other appeals or interferences that will directly affect, or be directly affected by, or have a bearing on the Board's decision in the pending appeal, there are no such appeals or interferences.

STATUS OF CLAIMS

A. TOTAL NUMBER OF CLAIMS IN APPLICATION

Claims in the application are: 1, 3, 5-11, and 13-18

B. STATUS OF ALL THE CLAIMS IN APPLICATION

1. Claims canceled: 2, 4, and 12
2. Claims withdrawn from consideration but not canceled: NONE
3. Claims pending: 1, 3, 5-11, and 13-18
4. Claims allowed: NONE
5. Claims rejected: 1, 3, 5-11, and 13-18

C. CLAIMS ON APPEAL

The claims on appeal are: 1, 3, 5-11, and 13-18

STATUS OF AMENDMENTS

All of the amendments to the claims have been entered. No after final amendments were made in this case.

SUMMARY OF INVENTION

The present invention provides a method, apparatus, and computer instructions for changing a pointer based on rate of movement of a pointing device. The present invention automatically changes a pointer based on user defined thresholds and the rate of movement of the pointing device. The user defines the changes for the pointer with respect to given thresholds. (see Specification, page 3).

ISSUES

The issues on appeal are:

1. Whether claims 1, 6, 8-11, and 15-18 are anticipated under 35 U.S.C. § 102 by *Shinichiro* (JP 10207441 A).
2. Whether claims 3, 5, and 7 are obvious under 35 U.S.C. § 103(a) as being unpatentable over *Shinichiro* (JP 10207441 A).
3. Whether claims 13 and 14 are obvious under 35 U.S.C. § 103(a) as being unpatentable over *Shinichiro* (JP 10207441 A) in view of *Heath et al* (US Patent No. 4,760,386).

GROUPING OF CLAIMS

The claims do not stand or fall together as a single group with regard to the rejection of claims 3, 5, and 7. The claims stand or fall based on the following grouping of claims:

Group A: claims 3 and 7

Group B: claim 5

ARGUMENT

I. 35 U.S.C. § 102, Anticipation, Claims 1, 6, 8-11, 15-18

The examiner has rejected claims 1, 6, 8-11, and 15-18 under 35 U.S.C. § 102 as being anticipated by *Shinichiro* (JP 10207441 A).

With regard to claims 1, 11, and 15-18, the examiner states:

As to independent claims 1, 11, 15, and 16, Shinichiro discloses a method in a data processing system for changing a pointer, the method comprising, receiving a user input indicating that a pointing device was moved (abstract, lines 4-6); calculating a rate of movement for the pointing device (abstract, lines 4-6); comparing the rate of movement with a given threshold of speed (abstract, lines 4-7); and automatically updating a presentation of the pointer based on the given threshold of speed in response to receiving the user input, wherein a presentation of the pointer is altered if the rate of movement exceeds the given threshold of speed (abstract, lines 4-11).

Office Action, dated November 18, 2003, page 2. The examiner further states:

Shinichiro discloses in the abstract, “a cursor display controller detects a cursor moving speed over a specified speed threshold value and performs display emphasizing processing for emphasizing a cursor image. This emphasizing processing is carried out by, for example, expanding the display size of the cursor, making a color back ground complimentary color or increasing a luminance difference between the background and the cursor or combination of these.” It’s clearly interpreted where Shinichiro changes the cursor display depending upon the moving speed over a threshold value. The changes occur after a user input. Applicant’s representative also argues where these changes are not shown in a series of changes. In the abstract Shinichiro discloses “or a combination of these” which can be interpreted to be a series of changes.

Final Office Action, dated April 21, 2004, page 5.

A prior art reference anticipates the claimed invention under 35 U.S.C. §102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). The *Shinichiro* reference cited by the examiner does not anticipate the present invention as recited in claim 1, because *Shinichiro* fails to teach each and every element of the claim. Independent claim 1, which is a representative claim, reads as follows:

1. A method in a data processing system for changing a pointer, the method comprising:

- receiving a user input indicating that a pointing device was moved;
- calculating a rate of movement for the pointing device;
- comparing the rate of movement with a given threshold of speed; and
- automatically updating a presentation of the pointer based on the given threshold of speed in response to receiving the user input, wherein a presentation of the pointer is altered if the rate of movement exceeds the given threshold of speed, and wherein the presentation of the pointer is a series of different changes in presentation based on the rate of movement for the pointing device.

Claim 1 recites the feature of automatically updating a presentation of the pointer based on the given threshold of speed in response to receiving the user input, wherein a presentation of the pointer is altered if the rate of movement exceeds the given threshold of speed, wherein other thresholds are present in addition to the given threshold of speed and wherein the pointer is changed each time one of the other thresholds is exceeded, and wherein the presentation of the pointer is a series of different changes in presentation based on the rate of movement for the pointing device. This feature is not taught by *Shinichiro*.

Shinichiro teaches a system for providing a cursor display controller for improving man-machine interface (Abstract, lines 1-3). *Shinichiro* teaches enabling a user to easily and quickly view a cursor position and not to lose sight of the cursor when the mouse is moved (Abstract, lines 1-3). The examiner interprets the following passage of *Shinichiro* as teaching the feature of presenting the pointer in a series of different changes in presentation based on the rate of movement for the pointing device:

Not only a cursor position but also its moving speed are obtained from the displacing amount of a mouse (S200). For understanding the position of the cursor, a user executes an operation for quickly moving a mouse as a sign to a calculator. A cursor display controller detects a cursor moving speed over a specified speed threshold value (S220) and performs display emphasizing processing for emphasizing a cursor image (S240). This emphasizing processing is carried out by, for example, expanding the display size of the cursor, making a color a background complimentary color or increasing a luminance difference between the background and the cursor or combination of these.

Shinichiro, Abstract, lines 4-11.

The passage above teaches using a cursor display controller to determine the movement

speed of the mouse, as well as determining the position of the cursor. By calculating the movement speed and the position of the cursor, the cursor image may be emphasized when the controller detects that the cursor speed is above a specified threshold value. Thus, when the cursor speed is above a threshold value, the controller may expand the cursor display size, make the background a complementary color or increase a luminance difference between the background and the cursor (Abstract, lines 9-11). The passage also mentions that any one of these display emphasizing processes may be implemented, or a combination of these processes may be used once the cursor speed is determined to be above the threshold value. In this manner, a user may easily and quickly view a cursor position and not to lose sight of the cursor when the mouse is moved.

However, as can be seen from the *Shinichiro* passage above, using a display emphasizing process or a combination of various display emphasizing processes to enable a user to track a cursor as defined in *Shinichiro* is not the same as automatically updating a presentation of the pointer using a series of different changes in presentation based on the rate of movement for the pointing device as claimed in the present invention. Emphasizing the cursor display in *Shinichiro* is performed by calculating whether the speed of cursor movement is above a single threshold, and if so, having the display controller expand the cursor display size, make the background a complementary color or increase a luminance difference between the background and the cursor emphasizing the cursor display. Although *Shinichiro* mentions that the cursor display emphasizing process may employ one or more of the emphasizing processes to be used in combination as described above, there is no teaching in *Shinichiro* of presenting the cursor in a series of different changes based on the rate of movement for the pointing device. *Shinichiro* makes no mention of altering the cursor display in a series of changes, wherein changes may be presented to the user based on the rate of movement of the pointing device, nor does it mention the desirability of doing so. Consequently, *Shinichiro* merely teaches calculating a single threshold value and altering the appearance of the cursor or display, using one or more display changes in combination, based on whether this single threshold is exceeded. Thus, even though *Shinichiro* teaches using more than one display change in combination to emphasize the cursor, *Shinichiro* fails to teach altering the cursor display in a series of different changes, such that the display changes are performed in a series based on the rate of movement of the pointing device.

Furthermore, *Shinichiro* does not teach, suggest, or give any incentive to make the needed

changes to reach the presently claimed invention. *Shinichiro* actually teaches away from the presently claimed invention because it teaches using either a single changed cursor display or using two or more changed cursor displays in combination as opposed to presenting the cursor in a series of different changes based on the rate of movement for the pointing device as in the presently claimed invention. Absent some teaching or incentive to modify *Shinichiro* to present the cursor in a series of successive changes based on the rate of movement for the pointing device, one of ordinary skill in the art would not be led to modify *Shinichiro* to reach the present invention when the reference is examined as a whole. Thus, the presently claimed invention can be reached only through an improper use of hindsight using applicants' disclosure as a template to make the necessary changes to reach the claimed invention.

In sum, *Shinichiro* teaches calculating a single threshold value and altering the appearance of the cursor or display, using one or more display changes in combination, based on whether this single threshold is exceeded. In contrast, the present invention, as recited in claims 1, 11, and 13-18, presents the cursor in a series of different changes based on the rate of movement for the pointing device, such that the cursor display may change in succession according to the rate of movement of the pointing device. Therefore *Shinichiro* fails to teach all elements of the claimed invention, and thus fails to anticipate the invention as recited in claims 1, 11, and 13-18.

Since claims 3, 6, and 8-10 depend from claim 1, the same distinctions between *Shinichiro* and the claimed invention in claim 1 apply for these claims. Consequently, it is respectfully urged that the rejection of claims 3, 6, and 8-10 have also been overcome.

Accordingly, applicants respectfully request that the rejection of claims 1, 3, 6, 8-11, and 15-18 under 35 U.S.C. § 102 be withdrawn.

II. 35 U.S.C. § 103, Obviousness, Claims 3, 5, and 7

The Examiner has rejected claims 3, 5, and 7 under 35 U.S.C. § 103 as being unpatentable over *Shinichiro* (JP 10207441 A).

GROUP A: Claims 3 and 7

This rejection is respectfully traversed for at least the same reasons as noted above with respect to the claim 1 from which claims 3 and 7 depend. Specifically, *Shinichiro* does not teach

altering the cursor display in a series of different changes, such that the display changes are performed in a series based on the rate of movement of the pointing device. The features relied upon as being taught in the *Shinichiro* reference are not taught or suggested by that reference, as explained above. As a result, the cited reference would not reach the claimed invention in claims 3 and 7.

Furthermore, claim 3 recites the feature of having other thresholds present in addition to the given threshold of speed and wherein the pointer is changed each time one of the other thresholds is exceeded as recited in claim 3. As the Examiner has admitted, *Shinichiro* does not teach this feature. The Examiner asserts, however, “it would have been obvious to one of ordinary skill in the art that the system of *Shinichiro* takes into account the cursor position and changing of distance.” Whether or not the *Shinichiro* system takes into account the cursor position and changing of distance does not provide a motivation for having other thresholds present in addition to the given threshold of speed and wherein the pointer is changed each time one of the other thresholds is exceeded. As *Shinichiro* seeks to enable a user to easily and quickly view a cursor position and not to lose sight of the cursor when the mouse is moved, there is no mention of having other thresholds present in addition to the speed threshold in *Shinichiro*, nor the desirability of doing so.

Accordingly, applicants respectfully request that the rejection of claims 3 and 7 under 35 U.S.C. § 103 be withdrawn.

GROUP B: Claim 5

This rejection is respectfully traversed for at least the same reasons as noted above with respect to the claim 1 from which claim 5 depends. Specifically, *Shinichiro* does not teach altering the cursor display in a series of different changes, such that the display changes are performed in a series based on the rate of movement of the pointing device. The features relied upon as being taught in the *Shinichiro* reference are not taught or suggested by that reference, as explained above. As a result, the cited reference would not reach the claimed invention in claim 5.

Furthermore, claim 5 recites the feature of having the pointer return to its previous appearance when the rate of movement for the pointing device decreases below the given threshold of speed. As the Examiner has admitted, *Shinichiro* does not teach this feature. The

Examiner asserts, however, “it would have been obvious to one of ordinary skill in the art that the pointer returns to the original appearance as in lines 1-2 of the abstract, Shinichiro discloses that the object of the invention is to enable the user to easily view/detect a quick moving cursor.”

However, emphasizing the currently displayed cursor image when a threshold is exceeded to allow a user to easily view the cursor is not the same as requiring the pointing device to return to its previous appearance when the rate of movement decreases below the speed threshold. As the examiner points out, *Shinichiro* seeks to allow a user to easily detect a moving cursor. Thus, Shinichiro merely requires that the current cursor be altered in a manner so as to emphasize a cursor image. There is no mention in the *Shinichiro* Abstract of having the altered cursor return to its previous appearance when the rate of movement for the cursor decreases below the given threshold of speed, nor of the desirability of doing so.

Therefore, the *Shinichiro* reference fails to teach or suggest the present invention as recited in claim 5. Accordingly, applicants respectfully request that the rejection of claim 5 under 35 U.S.C. § 103 be withdrawn.

III. 35 U.S.C. § 103, Obviousness, Claims 13 and 14

The Examiner has rejected claims 13 and 14 under 35 U.S.C. § 103 as being unpatentable over *Shinichiro* (JP 10207441 A) in view of *Heath et al* (US Patent No. 4,760,386).

This rejection is respectfully traversed for at least the same reasons as noted above with respect to the claim 1. Specifically, *Shinichiro* does not teach altering the cursor display in a series of different changes, such that the display changes are performed in a series based on the rate of movement of the pointing device. The features relied upon as being taught in the *Shinichiro* reference are not taught or suggested by that reference, as explained above. As a result, the cited reference would not reach the claimed invention in claims 13 and 14.

In addition, one of ordinary skill in the art would not combine *Shinichiro* with *Heath* when each reference is considered as a whole. In considering the references as a whole, one of ordinary skill in the art would take into account the problems recognized and solved. *Shinichiro* is directed towards altering a cursor display based on rate of movement of a mouse so that the cursor is easier to view (*Shinichiro*, Abstract). In contrast, *Heath* is directed toward a system in which a keyboard controlled cursor and a pointer controlled by a pointing device can coexist on a visual display device (*Heath*, col. 1, lines 7-10). As the present invention recognizes the problem

of changing a pointer based on rate of movement of a pointing device so that the pointer is easier to view, *Heath* does not teach the problem addressed by the present invention or its source. *Heath* actually teaches away from the presently claims invention for it teaches removing the mouse pointer from the visual display screen, as shown below:

Accordingly, with the present invention the mouse pointer is temporarily removed from the visual display screen when the first character is being updated on the screen. The mouse pointer is left hidden from the screen until the keyboard has been idle for a predetermined period of time. (*Heath*, col. 1, lines 32-37).

Thus, *Heath* is directed towards hiding a mouse pointer, rather than enhancing the pointer display in order for a user to be able to track the pointer. Consequently, one of ordinary skill in the art would therefore not be motivated to combine or modify *Shinichiro* with *Heath* in the manner required to form the solution disclosed in the present invention.

Accordingly, applicants respectfully request that the rejection of claims 13 and 14 under 35 U.S.C. § 103 be withdrawn.

CONCLUSION

In view of the comments above, it is respectfully urged that the rejection of claims 1, 3, 5-11, and 13-18 not be sustained.



Cathrine K. Kinslow
Reg. No. 61,886
YEE & ASSOCIATES, P.C.
PO Box 802333
Dallas, TX 75380
(972) 367-2001

APPENDIX OF CLAIMS

The text of the claims involved in the appeal are:

1. A method in a data processing system for changing a pointer, the method comprising:
receiving a user input indicating that a pointing device was moved;
calculating a rate of movement for the pointing device;
comparing the rate of movement with a given threshold of speed; and
automatically updating a presentation of the pointer based on the given threshold of speed in response to receiving the user input, wherein a presentation of the pointer is altered if the rate of movement exceeds the given threshold of speed, and wherein the presentation of the pointer is a series of different changes in presentation based on the rate of movement for the pointing device.
3. The method of claim 1, wherein other thresholds are present in addition to the given threshold of speed and wherein the pointer is changed each time one of the other thresholds is exceeded.
5. The method of claim 1, wherein the pointer returns to its previous appearance when the rate of movement for the pointing device decreases below the given threshold of speed.
6. The method of claim 1, wherein the threshold is a measurement of a distance traveled with respect to a time interval for the distance traveled.
7. The method of claim 1, wherein the pointing device is one of a mouse, a pointing stick, a touch pad, a joystick, a key on a keyboard, an electronic pen, or a trackball.

8. The method of claim 1, wherein the updating step includes:
changing the color of the pointer.
9. The method of claim 1, wherein the updating step includes: changing the shape of the pointer.
10. The method of claim 1, wherein the updating step includes:
changing the size of the pointer.
11. A method in a data processing system for changing a pointer, the method comprising:
receiving a user input specifying multiple thresholds;
defining changes for the pointer; and
associating each threshold of speed with a change for the pointer;
wherein the pointer is changed each time one of the thresholds is exceeded; and
wherein changes of the pointer are presented in a series of different changes based on the rate of movement of the pointer.
13. A data processing system comprising:
a bus system;
a communications unit connected to the bus system;
a memory connected to the bus system, wherein the memory includes a set of instructions; and

a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to receive a user input indicating that a pointing device was moved; calculates a rate of movement for the pointing device; compares the rate of movement with a given threshold of speed; and automatically updates a presentation of the pointer based on the given threshold of speed in response to receiving the user input, wherein a presentation of the pointer is altered if the rate of movement exceeds the given threshold of speed, and wherein the presentation of the pointer is a series of different changes in presentation based on the rate of movement for the pointing device.

14. A data processing system comprising:

a bus system;

a communications unit connected to the bus system;

a memory connected to the bus system, wherein the memory includes a set of instructions; and

a processing unit connected to the bus system, wherein the processing unit executes the set of instructions to receive a user input specifying multiple thresholds; defines changes for the pointer; and associates each threshold of speed with a change for the pointer, wherein the pointer is changed each time one of the thresholds is exceeded, and wherein changes of the pointer are presented in a series of different changes based on the rate of movement of the pointer.

15. A data processing system for changing a pointer, the data processing system comprising:

receiving means for receiving a user input indicating that a pointing device was moved;

calculating means for calculating a rate of movement for the pointing device;

comparing means for comparing the rate of movement with a given threshold of speed;
and

updating means for automatically updating a presentation of the pointer based on the given threshold of speed in response to receiving the user input, wherein a presentation of the pointer is altered if the rate of movement exceeds the given threshold of speed, and wherein the presentation of the pointer is a series of different changes in presentation based on the rate of movement for the pointing device.

16. A data processing system for changing a pointer, the data processing system comprising:
receiving means for receiving a user input specifying multiple thresholds;
defining means for defining changes for the pointer; and
associating means for associating each threshold of speed with a change for the pointer;
wherein the pointer is changed each time one of the thresholds is exceeded; and
wherein changes of the pointer are presented in a series of different changes based on the rate of movement of the pointer.

17. A computer program product in a computer readable medium for changing a pointer, the computer program product comprising:

first instructions for receiving a user input indicating that a pointing device was moved;
second instructions for calculating a rate of movement for the pointing device;
third instructions for comparing the rate of movement with a given threshold of speed;
and
fourth instructions for automatically updating a presentation of the pointer based on the

given threshold of speed in response to receiving the user input, wherein a presentation of the pointer is altered if the rate of movement exceeds the given threshold of speed, and wherein the presentation of the pointer is a series of different changes in presentation based on the rate of movement for the pointing device.

18. A computer program product in a computer readable medium for changing a pointer, the computer program product comprising:

first instructions for receiving a user input specifying multiple thresholds;
second instructions for defining changes for the pointer; and
third instructions for associating each threshold of speed with a change for the pointer;
wherein the pointer is changed each time one of the thresholds is exceeded; and
wherein changes of the pointer are presented in a series of different changes based on the rate of movement of the pointer.